Benjamin Bengfort

Resume

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Experience

CEO and Founder, *Rotational Labs, LLC*, Queenstown, MD. **2020–present**

Faculty Director, *Georgetown University*, Washington, DC. **2014–present**
Adjunct Faculty, Data Analytics Certificate Program (CCPE). Teaching courses in the *Data Science* and *Advanced Data Science* certificates.

Chief Data Scientist, *PingThings, Inc.*, Washington, DC. **2018–2020**
Deep neural modeling of sensor data for the smart grid, development of time-series databases and distributed sensor systems.

Data Scientist, *Cortex Building Intelligence*, Washington, DC. **2017–2018**
Time-series analysis and modeling of building management sensor data for real-time recommendations to improve building energy efficiency.

Partner, *District Data Labs*, Washington, DC. **2014–2017**
Architect and develop innovative open source projects, facilitating local developer contributions and research, including Yellowbrick, visual steering for machine learning, and Baleen, a large scale corpus ingestion engine.

Chief Data Scientist, *Cobrain Company*, Bethesda, MD. **2013–2014**
Developed a Global Recommendation Engine, using Collaborative Filtering algorithms as well as Active Learning and adaptive systems from a machine-learning standpoint. Graph traversal and clustering across massive data stores required distributed Graph databases: Titan, as well as strong computation in Hadoop and Python with Pandas and NumPy.

Chief Technology Officer, *Unbound Concepts*, Baltimore, MD. **2011–2013**
Natural Language Processing across a large dataset of children's literature using
Machine Learning and predictive analysis with clustering and multivariate non-linear regression
Big data analysis applied to the NLP and ML using Hadoop and MapReduce techniques.

Lead Programmer, *Tactical Network Solutions*, Columbia, MD. **2010–2012**
Python software development for embedded, mobile and server applications
Large-scale and real-time data analysis of Petabytes of wireless packet collects.
Real time asset tracking software development with geolocation and KML toolkits

CMS Analyst, *Oxford University Press*, Oxford, United Kingdom. **2007–2009**
Management of custom content management solutions for electronic publishing division

Junior Network Engineer, *CenGen, Inc.*, Columbia, MD. **2003–2004**
Network support for DARPA's Grand Challenge & USMC Condor

Education

PhD Computer Science, *University of Maryland, College Park.* **2014-2019**
Dissertation: Planetary Scale Data Storage (defended November 2018)

M.S. Computer Science, *North Dakota State University.* **2008-2010**
Phi Kappa Phi, Upsilon Pi Epsilon

B.A. Economics, *University of Maryland, College Park.* 2004-2006
Primanum Honor Society

English Major, *United States Naval Academy.* 2002-2003

Skills

Software Development: GoLang 1.14+, gRPC, Python 3.6+, JavaScript, Java, C/C++, Kubernetes, Docker, Git

Big Data: Spark, Hadoop, MapReduce, HDFS, Distributed Systems, Celery, DISTIL

Machine Learning: Scikit-Learn, Yellowbrick, TensorFlow, SparkML, PyTorch, GraphX

NLP: NLTK, spaCy, Gensim, TextBlob, Pattern

Application Development: Go, Django, Nginx, AJAX, jQuery, Bootstrap, Flask, REST micro-services

Databases: PostgreSQL, BTrDB, MongoDB, BoltDB, LevelDB, Redis, Hive, Titan, Neo4j, SQLite

Publications

Benjamin Bengfort and Rebecca Bilbro. Yellowbrick: visualizing the scikit-learn model selection process. *Journal of Open Source Software*, 4(35):1075, 2019.

Benjamin Bengfort, Rebecca Bilbro, and Tony Ojeda. *Applied Text Analysis with Python: Enabling Language Aware Data Products with Machine Learning*. O'Reilly Media, Inc.

Benjamin Bengfort and Xiaojiang Du. Efficient resource allocation in Hybrid Wireless Networks. In *Wireless Communications and Networking Conference (WCNC), 2011 IEEE*, pages 820–825. IEEE.

Benjamin Bengfort and Pete Keleher. Brief Announcement: Hierarchical Consensus. In *Proceedings of the 2017 ACM Symposium on Principles of Distributed Computing*, pages 355–357. ACM.

Benjamin Bengfort and Pete Keleher. Federating Consistency for Partition-Prone Networks. In *Proceedings of the 2017 IEEE 37th International Conference on Distributed Computing Systems (ICDCS)*. IEEE.

Benjamin Bengfort and Jenny Kim. *Data Analytics with Hadoop: An Introduction for Data Scientists*. O'Reilly Media, Inc.

Benjamin Bengfort and Jenny Kim. *Hadoop Fundamentals for Data Scientists*. O'Reilly Media, Inc.

Benjamin Bengfort, Philip Y. Kim, Kevin Harrison, and James A. Reggia. Evolutionary design of self-organizing particle systems for collective problem solving. In *Swarm Intelligence (SIS), 2014 IEEE Symposium On*, pages 1–8. IEEE.

Benjamin Bengfort, Konstantinos Xirogiannopoulos, and Pete Keleher. Anti-Entropy Bandits for Geo-Replicated Consistency. In *Proceedings of the 38th International Conference on Distributed Computing Systems (ICDCS)*. IEEE Computer Society Press.

Tony Ojeda, Sean Patrick Murphy, Benjamin Bengfort, and Abhijit Dasgupta. *Practical Data Science Cookbook*. Packt Publishing Ltd.